



ASSESSING THE ATTITUDE OF TEACHER EDUCATORS TOWARDS THE INTEGRATION OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN TEACHING LEARNING PROCESS

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ABSTRACT

The purpose of the present study is to assess the attitude of teacher educators in relation to gender, qualification and experience towards the integration of Information and Communication Technology (ICT) in teaching learning process. The survey was conducted in 10 Government and Private Teacher Education Institutions of Kashmir Division (UT of J&K, India). Descriptive survey method was employed for the present investigation. Stratified sampling technique was used to select the sample of 100 teacher educators teaching in government and private institutions. Data collection technique employed in this present study was Attitude Scale towards Information Technology for Teachers (ASTITT-IN) by Nasrin and Islahi (2012). The data analysis was performed using descriptive statistics such as Mean, Standard Deviation, percentage and t-test. The study reveals that there was no significant difference in the attitudes between male and female teacher educators. However, a notable distinction emerged in the attitudes of teacher educators from government and private institutions was that the teacher educators from government institutions were found to possess higher level of favourable attitude towards ICT. The study also delved into the impact of professional experience on teacher educators' attitudes towards ICT integration and the findings indicate a noticeable difference based on the participants' experience levels. A small subset of educators exhibited a highly positive attitude towards ICT integration while the majority displayed a generally positive orientation. This study contributes to the existing literature by providing insights into the nuanced perspectives of teacher educators in both government and private institutions regarding ICT integration. The identified variations based on institutional affiliation and experience levels underscore the need for tailored strategies and interventions to foster a more widespread positive attitude towards the incorporation of ICT tools in the education sector and prepare teachers to teach effectively with technology.

KEYWORDS: Attitude, Information and Communication Technology (ICT), Teacher Education, Teacher Educators, ICT Integration, Teaching Learning

1. INTRODUCTION

Information and communication technology (ICT) is influencing every aspect of human life today and plays significant role in our lives today at our work place, business, education, and services. It is now being recognized as catalyst for change in our working conditions, exchanging and accessing information, teaching methods and learning approaches and scientific research. Its use in the classroom give students opportunities to learn and apply the required 21st century skills and thereby improves overall teaching learning process (Ratheeswari, 2018). The use of ICT can raise educational quality and connect learning to real-life situations as indicated by previous studies (Lowther, et al. 2008; Weert and Tatnall 2005). ICT is often perceived as a catalyst for change, change in teaching style, change in learning approaches, and change in access to information (Watson, 2001). ICT helps students focus on higher-level concepts rather than less meaningful tasks in a constructive learning approach (Levin and Wadmany 2006). Various ICT-supported pedagogical practices endeavored to realize new goals important for lifelong learning in an information society. One of the greatest challenges facing any teacher education institution today is preparation of quality teachers whom are capable of using ICT efficiently and effectively. Unless and until these teachers are trained for optimal use of ICT based technologies, any qualitative change

in teaching learning process is very far away. The success of technology use in education mostly depends on educator's attitude towards the use of technology now considered as an important element in predicting the use of technologies in educational setting (Albirini, 2006). The use of technology in education contributes a lot in the pedagogical aspects which leads to effective learning with the help and support from ICT based environment (Jamieson, Procteretal, 2013). A number of research studies exemplify that teachers do not use ICT in teaching learning process for achieving educational outcomes effectively. As a result of this, teacher attitude towards ICT and its use have gained much significance in today's educational settings. The success of any initiative to implement technology in any educational programme depends strongly upon the support and attitudes of teacher educators involved. Teacher educators' use of technologies in their instruction may not only make difference to the learning of the future teachers, but also become the way for them to teach in the future welcoming the more advance era of technology.

The current study is aimed to access teacher educators' attitude towards the Integration of ICT in Teaching Learning process.

2. OBJECTIVES OF THE STUDY

The following objectives have been formulated for the present study:

1. To assess the attitude of Teacher Educators towards Integration of Information and Communication Technology in general.
2. To compare the attitude of Teacher Educators towards Integration of Information and Communication Technology with respect to gender.
3. To compare the attitude of Teacher Educators towards Integration of Information and Communication Technology with respect to qualification.
4. To compare the attitude of Teacher Educators towards Integration of Information and Communication Technology with respect to level of experience.
5. To compare the attitude of Teacher Educators towards Integration of Information and Communication Technology with respect to Government and Private dichotomy.

3. HYPOTHESES OF THE STUDY

The following hypotheses have been formulated for the present study:

1. H0-1 There will be no significant difference between attitude of male and female Teacher Educators towards Integration of ICT in teaching learning..
2. H0-2 There will be no significant difference between attitude of highly qualified and less qualified Teacher Educators towards Integration of ICT in teaching learning.
3. H0-3 There will be no significant difference between attitude of highly experienced and less experienced Teacher Educators towards Integration of ICT in teaching learning .
4. H0-4 There will be no significant difference between attitude of teacher educators towards integration of ICT in teaching learning in Government and Private Teacher Education Institutions.

4. METHODOLOGY AND PROCEDURE

4.1 Population Description:

The population in this study comprises teacher educators from 10 Government and Private Institution of Kashmir division (UT of J&K, India). This inclusion allows for a comprehensive understanding of the diverse settings within the education system in Kashmir Division. The target population includes teacher educators who are actively involved in teacher training and have diverse educational backgrounds. They may hold academic degrees in education, pedagogy, or related fields. Non-educator staff members within the institutions, such as administrative staff or maintenance personnel, are not part of the population as the study's focus is on individuals directly involved in teacher training.

4.2 Sample Frame

The sample frame for this research study encompasses the teacher educators in the Kashmir division involved in teacher training programmes. The inclusion criteria emphasize the geographic location, educational affiliation, and the professional

role of teacher educators. It encompasses government teacher training institutions, which are directly administered by government educational authorities, and private teacher training institutions affiliated with government institutions. This comprehensive approach ensures that the sample frame covers a diverse range of teacher educators in a region marked by unique sociocultural and geopolitical influences. The sample frame for this study was precisely crafted through a multifaceted approach, combining both online research and extensive consultations with knowledgeable individuals. However, recognizing the importance of local insights and expertise, additional information was garnered through open dialogues with educators, supervisors, and individuals hailing from diverse districts of Kashmir division.

4.3 Sample Procedure

The sample selection procedure was executed using a stratified sampling approach in 10 institutions. Two distinct strata were identified, comprising of government and private institutions in the Kashmir division. The sample size was determined based on considerations of resource availability and research objectives, with proportional allocations to each stratum. Random selection techniques were employed within each stratum to ensure an unbiased representation, allowing every institution to have an equal opportunity for inclusion. The findings from this stratified sample were then generalized to draw meaningful conclusions about ICT integration in teaching learning process within the broader population of government and private institutions contributing to the validity and reliability of the findings.

Sample

A sample of 100 teacher educators comprising of 47 males and 53 females were chosen for the present analysis from 5 Government and 5 private institutions as shown in Table 1 with 10 respondents from each institution.

Name of the Teacher Training Institution	Institution Type	No. of Respondents
Central University of Kashmir	Government	10
University of Kashmir	Government	10
Government College of Education M.A Road Srinagar	Government	10
SCERT, Srinagar	Government	10
DIET Srinagar	Government	10
Maxwell College of Education DaliporaPulwama	Private	10
Dr. Iqbal's Training College of Education Mehjoornagar Srinagar	Private	10
Kashmir Creative Education and Foundation Paayar, Pulwama	Private	10
TahiraKhanam College of Education Lawaypora Srinagar	Private	10

Al Ahad College of Education Krang-sooAnantnag	Private	10
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Table 1: List of Teacher Education Institutions with number of respondents for this study.

5. TOOLS AND STATISTICAL TECHNIQUES

Attitude Scale towards Information Technology for Teachers (ASTITT-NI) by Nasrin and Islahi (2012) and published by National Psychological Corporation was used for data collection. Mean, Standard Deviation and t-test has been computed for analyzing the data in this study.

6. RESULT AND DISCUSSION

The Attitude of teacher educators towards Integration of ICT in teacher learning process was obtained on selected sample of teachers from Government and Private Teacher Education Institutions.

Hypothesis: H0-1 There will be no significant difference between attitude of male and female Teacher Educators towards Integration of ICT in teaching learning..

Gender	N	Mean	SD	F-test value	Sig	t-value	df	Sig.(2 tailed) p	Mean difference
Males	47	117.36	12.74	1.68	.19	.84	98	.38	2.147
Females	53	119.51	10.91						

Table 2: Mean Attitude Scores of male and female Teacher Educators towards integration of ICT in teaching learning.

An independent sample t-test was conducted to compare the attitude of Male and Female teacher educators towards the integration of ICT in teaching learning. Table 2 revealed the *Sig. Level for Leaven's* test of Equality of variance (F-test value) 0.19 is greater than the *alpha level* 0.05 indicating that assumption of Equality of variance is met. The Mean score for the Male teacher educators is 117.36 with a *Standard Deviation* of 12.74, while the Mean score for the Female teacher educators is 119.51 with a *Standard Deviation* 10.91. The calculated *t-value* is 0.84, and the corresponding *p-value* is 0.38. The *p-value* that is >0.05 indicates a non-significant difference in attitude towards ICT integration in teaching and learning between Male and Female teacher educators. Hence, the null hypothesis is accepted.

Hypothesis: H0-2 There will be no significant difference between attitude of highly qualified and less qualified Teacher Educators towards Integration of ICT in teaching learning.

Qualification	Mean	SD	F-test value	Sig	t-value	df	Sig.(2 tailed) p	Mean difference
PhD	121.63	12.578	3.071	.083	.2804	98	.006	6.476
Non-PhD	115.16	10.456						

Table 3: Mean Attitude Scores of highly qualified and less qualified teacher educators towards integration of ICT in teaching and learning.

An independent sample t-test was conducted to compare the attitude of PhD and Non PhD teacher educators towards the integration of ICT integration in teaching and learning. Table 3 indicates the *Sig. Level for Leaven's* test of Equality of variance is 0.83 is greater than the conventional *alpha level* 0.05 revealing that assumption of Equality of variance is met. The Mean score for the PhD teacher educators is 121.63 with a Standard Deviation of 12.578, while the Mean score for the Non PhD teacher educators is 115.16 with a Standard of Deviation of 10.46. The calculated *t* value is 2.81, and the corresponding *p-value* is 0.006. Since the *p-value* is <0.05, it indicates that there is a significant difference in the attitudes of teacher educators towards ICT integration in teaching and learning between the two groups. Hence, the null hypotheses stands rejected.

Hypothesis: H0-3 There will be no significant difference between attitude of highly experienced and less experienced Teacher Educators towards Integration of ICT in teaching learning.

Level of Experience	Mean	SD	F-test value	Sig	t-value	df	Sig.(2 tailed) p	Mean difference
Highly Experienced (Above 5 years)	118.35	13.48						
Less Experienced (1-5 years)	117.75	9.97	2.586	.111	.26	98	.006	.800

Table 4: Mean Attitude Scores of highly experienced and less experience teacher educators towards integration of ICT in teaching and learning.

An independent sample t-test was conducted to compare the attitude of highly experienced and less experienced teacher educators towards the integration of ICT in teaching and learning. Table 4 illustrates the *Sig. Level for Leven's* test of Equality of variance is 0.111 that is greater than the alpha level 0.05 revealing that assumption of Equality of variance is met for t-test. The Mean score for highly experienced teacher educators is 118.35 with a Standard Deviation of 13.48, while the Mean score for the less experienced teacher educators is 117.75 with a Standard Deviation of 9.97. The calculated *t-value* is 0.26, and the corresponding *p-value* is 0.12. Since the *p-value* is >0.05

which indicates a non-significant difference in attitude towards ICT integration in teaching and learning between highly and less experienced teacher educators. Hence, the null hypotheses stands accepted.

Hypothesis: H0-4 There will be no significant difference between attitude of teacher educators towards integration of ICT in teaching learning in Government and Private Teacher Education Institutions.

Type of Teacher Education Institution	Mean	SD	F-test value	Sig	t-value	df	Sig.(2 tailed) p	Mean difference
Government	120.69	12.14	1.56	.216	2.795	98	.006	6.937
Private	113.75	10.25						

Table 5: Mean Attitude Scores of teacher educators of Government and Private Institutions towards integration of ICT in teaching and learning.

There is a significant difference in the attitudes of teacher educators towards ICT integration in teaching and learning in Government and Private teacher education institutions. The Mean attitude score from Government Institutions was found to be 120.69 with Standard Deviation of 12.40 while for Private Institutions; the Mean attitude score was 113.75 with Standard Deviation of 10.27. . These statistics indicate that, on average, the teacher educators from Government Institutions have a more positive attitude towards ICT integration compared to their counterparts in private institutions. The calculated mean difference of 6.937 further reveals that there is a substantial disparity in attitudes. This indicates that, on average, teacher educators from Government institution scored almost 7 points higher in their attitude towards ICT integration in teaching learning when compared with Private Institution. The Levene's test of equal variance (F-test value) with a result of 0.12 suggests that the variances in attitude scores between the two groups are not significantly different .The obtained p-value of 0.006 indicates that this difference in attitudes is statistically significant. Hence, null hypothesis stands rejected.

7. FINDINGS OF THE STUDY

1. Teacher educators' attitudes towards the integration of ICT in teaching learning demonstrate an overall positive sentiment, with the majority (87%) expressing favourable attitudes. The 29% who exhibit a highly favourable attitude indicate a substantial endorsement of ICT integration, reflecting a progressive mindset among a significant portion of educators. The 58% with a positively favourable attitude further reinforce the widespread acceptance of ICT in teaching learning. The 12% with a moderately favourable attitude may signify a group with reservations or concerns that warrant exploration.
2. The study did not identify significant differences in the attitudes of male and female teacher educators. The

gender as such does not appear to play a significant role in shaping teachers' attitudes toward technology. This consistent finding suggests that gender equity in technology adoption is a common trend among educators.

3. The teacher educators from Government and Private Institutions is compared to confirm their attitude towards use of ICT in teaching learning and it is found that there is a significant difference between the attitude of teacher educators from Government and Private institutions towards the integration of ICT in teaching learning.
4. The difference in the attitudes for highly qualified and less qualified teacher educators towards ICT integration in teaching learning offer insightful distinctions. The higher mean of value among highly qualified educators indicates a more favourable attitude compared to their less qualified counterparts. This divergence may be attributed to their advanced academic background suggesting that higher qualifications correlate with a more positive stance on ICT integration in teaching learning. The potential influence of academic expertise on attitudes towards technology in education is a noteworthy finding, emphasizing the importance of professional development and academic qualifications in shaping educators' perspectives.
5. There is statistically no significant difference in the attitudes of less experienced and highly experienced teacher educators toward ICT integration in teaching learning suggested by a minimal numerical difference between the two groups. The study suggests a consistency in positive attitudes across different experience levels, showcasing a collective acknowledgment of the importance and relevance of ICT in educational practices. These results contribute valuable insights to the understanding of the homogeneity in attitudes towards ICT integration among teacher educators, regardless of their varying levels of experience, thereby underscoring the universality of the positive stance toward technology in education

8. CONCLUSION

The attitude of teachers towards use of new technology varies from moderately favourable to highly favourable towards integration of ICT in teaching learning. The study reveals that there was no significant difference between the attitude of male and female teacher educators towards integration of ICT in teaching learning. The study also suggests that those with higher educational qualifications tend to have a more positive attitude towards integrating ICT into their teaching practices which emphasis Government and policymakers to focus on promoting academic excellence of teachers. A statistically significant distinction in attitudes between teacher educators from Government institutions and Private institutions reveal that teacher educators from Government Institutions express a greater openness and enthusiasm for incorporating ICT into their teaching and learning practices which underscore the potential influence of employment sector on teacher educators' perception and readiness to embrace ICT as an instructional tool.

Efforts should be made by Government and policy makers to provide ample opportunity for the teachers to undergo training programmes for optimal use of ICT in teaching learning for improving overall academic atmosphere and thereby prepare teacher to teach effectively with technology.

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